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EFFECT OF N-3 POLYUNSATURATED FATTY ACIDS AND ROSUVASTATIN ON LEFT VENTRICULAR FUNCTION IN PATIENTS WITH CHRONIC HEART FAILURE. A SUBSTUDY OF THE GISSI-HF TRIAL

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Background: The GISSI-HF trial demonstrated that n-3 polyunsaturated fatty acids (PUFA 1g/d) reduce mortality in patients with symptomatic heart failure (HF) of any cause. A substudy of the GISSI-HF trial was planned to prospectively investigate whether PUFA and/or rosuvastatin may improve left ventricular (LV) function in such patients.

Methods: The effects of PUFA and/or rosuvastatin compared to placebo on LV dimensions and function were assessed at 1, 2 and 3 years in 595 patients with chronic HF, in NYHA class II-IV, already treated with recommended therapies. Echocardiographic recordings were ready by a core laboratory to ensure consistent and blinded quantitative analysis.

Results: Patients were randomised to PUFA (n=308) or placebo (n= 287). A second randomisation (rosuvastatin vs placebo) was performed in 411 patients. At baseline, mean (95%CI) LV ejection fraction (EF) was 30 % (29-31) in the placebo and 30 % (29-31) in the PUFA group; LV end-diastolic volume was 232 ml (223-242) in PUFA and 223 ml (214-233) in the placebo group. LVEF increased significantly with PUFA (3.2% at 1 year, 3.4 % at 2 years and 4.2 % at 3 years vs 1.3% at 1 year, 1.8% at 2 years and 2.4 % at 3 years with placebo, p=0.005). Diastolic function and LV dimensions were not changed by PUFA. Rosuvastatin had no significant effects on LV function

Conclusions: PUFA can provide a small but statistically significant advantage in terms of LV function in patients with symptomatic HF of any cause, already treated with recommended therapies.